

### **REMARKS**

This paper is prepared in response to the final Office action mailed 30 June 2008 (Paper No. 20080624).

#### **Status of the Claims**

Claims 21 through 60 are pending in the application. Claims 1 through 20 were previously canceled.

#### **Listing of the Claims**

Pursuant to 37 CFR §1.121(c), this listing of the claims, including the text of the claims, will serve to replace all prior versions of the claims, in the application.

#### **Amendment of the Claims**

No claims are amended by this Paper.

#### **Claim Rejections**

- I. Rejection of Claims 21-23, 25, 26, 30-34, 36, 37, 41-44, 46, 47, 51-52, 54, 55, 57, 58 and 60 under 35 U.S. C. §102(e) are being anticipated by Chhabra, U.S. Patent No. 5,831,791, and Claims 52-60 are rejected under 35 U.S.C. §102(e) as being anticipated by Crane *et al.*, U.S. Patent No. 5,721,650**

Claims 21 through 23, 25, 26, 30 through 34, 36, 37, 41 through 44, 46, 47, 51 through 52, 54, 55, 57, 58 and 60 are rejected under 35 U.S. C. §102(e) as anticipated by Chhabra, U.S. Patent No. 5,831,791, and claims 52 through 60 are concurrently rejected under 35 U.S.C. §102(e) as anticipated by Crane *et al.*, U.S. Patent No. 5,721,650. The Examiner's arguments presented as factual "evident" on the administrative record before the Office. Applicant continues its traversal of these rejections.

- A. The Examiner's interpretation of the teachings by Chhabra ' 791 and by the**

**teachings of Crane *et al.*, '650 contravenes the class definitions of Class 360.**

In support of this anticipation rejection, Paper No. 20080624 states that,

“At the outset, the Examiner directs the attention of the reader of this Office action to see Examiner’s marked-up copy of FIG. 13b of Chhabra (US 5,831,791) previously enclosed at the end of the Office action mailed on February 14, 2008.

As per claim 21, Chhabra (US 5,831,791) discloses a negative pressure air bearing slider (e.g., 200 - see FIGS. 13a, 13b; see also appended Examiner’s marked-up copy of FIG. 13b of Chhabra (US 5,831,791) previously enclosed at the end of the Office action mailed on February 14, 2008) having a negative pressure cavity (C2), comprising: a body with a principal surface (PS) disposed to confront a recording surface of a recording medium, said principal surface (PS) having a lead portion (LP) and a rear portion (RP), said lead portion (LP) being spaced upstream from said rear portion relative to a rotational direction (RD) of any recording medium confronted by said slider (200), said lead portion (LP) having a front edge (FE), said rear portion (RP) having a rear edge (RE), said front edge (FE) and said rear edge (RE) together defining boundaries of said principal surface (PS) transverse to said front edge (FE) and said rear edge (RE) in a longitudinal direction (LD) of said slider body (200); and a U-shaped air bearing platform (flat facing, non-tapered portion of rails 204 205, including the non-tapered portions 204, 205, which collectively form the U-shaped air bearing platform); the U-shaped air bearing platform spaced apart from said front edge (FE) (by at least the slanted, non-flat leading edge taper portion of rails 204, 205 - see FIG. 13B) circumscribing a majority of said principal surface (PS) while defining a negative pressure cavity (C2) on said principal surface (PS), said U-shaped air bearing platform (U-shaped portions of 204, 205) comprising not more than two separate air bearing platforms (e.g., each flat, non-tapered portion of rail, 204 and 205, is considered a separate air bearing platform) each extending rearwardly toward said rear portion (RP) of said principal surface (PS) and respectively terminating at a first rear termination (233) and a second rear termination (233') to form trailing terminal ends of said negative pressure cavity spaced-apart from said rear portion (RP), at least one of said not more than two separate air bearing platforms (U-shaped portions of 204, 205)

including a sidewall contiguous with one of said boundaries (note that both 204 and 205 form a contiguous sidewall with slider edge at boundary); at least one of said first rear termination (233) and said second rear termination (233') not coinciding with said rear edge (RE), and being disposed upstream of said rear edge (RE) relative to said rotational direction (RD) of said recording medium.

Paper No. 20080624 makes a comparable argument in what appears to be an inappropriate erroneous interpretation of crane '640, by stating that,

Paper No. 20080624 states that:

“At the outset, the Examiner directs the attention of the reader of this Office action to see Examiner’s marked-up copy of FIG. 10A of Crane et al. (US 5,721,650) previously enclosed at the end of the Office action mailed on February 14,2008.

As per claim 52, Crane et al. (US 5,721,650) discloses a negative pressure air bearing slider (FIG. 10A; see also appended Examiner’s marked-up copy of FIG. 10A of Crane et al. (US 5,721,650) at the end of this Office action)) having a negative pressure cavity (100), comprising: a body with a principal surface disposed to confront a recording surface of a recording medium, said principal surface (PS) having a lead portion (LP) separated from a rear portion (RP) by a central portion (CP), said lead portion (LP) and said central portion (CP) being spaced upstream from said rear portion (RP) relative to a rotational direction of any recording medium confronted by said slider (70), said lead portion (LP) having a front edge (FE), said rear portion (RP) having a rear edge (RE), said front edge (FE) and said rear edge (RE) connected together by longitudinal sides (sides of slider (70)) of said principal surface in a longitudinal direction (LD) of said slider body (70); and a plurality of arcuately shaped arms (82, 84) - note that the arms do not include the lapped leading edge taper (102) as seen in FIG. 3a and 10A of Crane et al. (US 5,721,650) - the arms (82, 84) each having distal ends extending from opposite ones of said longitudinal sides curving inwardly across said central portion (CP) of said principal surface (PS) with spaced-apart proximal facing ends (at 280 on each side - see FIG. 10A) of said arms (82, 84) together forming a U-shaped air bearing platform (82, 84)

located between said longitudinal sides to separate a negative pressure cavity (at 100) defined by said arms (82, 84) on said principal surface (PS) from said longitudinal sides, at least one of said arms (82, 84) extending from an edge of one of said longitudinal sides; at least one of said arms (82, 84) having a proximal end spaced-apart from said front edge by at least the leading edge taper (102); a distal end of at least one of said arms (82, 84) forming a terminal end (TE) wholly within said central portion (CP) and spaced-apart from said rear portion (RP).

The contravention of the class definitions of class 360 upon which this rationale is premised, raises serious questions that concern Applicant. More specifically, this rationale extracted from Paper No. 20080624 in support of the Examiner's conclusion of that claims 21, 31, 42, 52 and 55 are anticipated under 35 U.S.C. §102(e) by Chhabra U.S. 5,831,791, is premised upon the Examiner's assertions that,

“Chhabra (US 5,831,791) discloses a U-shaped air bearing platform ... . That is, the U-shaped air bearing platform is formed by the *flat facing, non-tapered portion of rails 204 205*, including the non-tapered portions 204, 205, which collectively form the U-shaped air bearing platform.” (Emphasis in original)

and that Crane *et al.* '650 teaches,

“a plurality of arcuately shaped arms (82, 84) - note that the arms do not include the lapped leading edge taper (102) as seen in FIG. 3a and 10A of Crane *et al.* (US 5,721,650).”

These excerpts from the Examiner's rationale endeavors to ignore the explicit teaching of Chhabra '791 that in the construction of “NPAB 190”, “first and second raised side rails 204, 205 have leading edge tapers 226, 227 for facilitating lift”<sup>1</sup> by making an artificial segregation of “leading edge tapers 226, 227” from “first and second raised side rails 204, 205,” and the explicit teaching of Crane '650 that “Side rails 82 and 84 each include a leading portion 256, a

---

<sup>1</sup> Chhabra '791 , column 5, lines 49 and 50.

waist portion 258, and a trailing portion 260.”<sup>2</sup> Applicant submits that modification of Chhabra ‘791 in this manner ignores the classification of “*leading end detail*”, that is, “subject matter including specifics of the slider beading end” is classified in Subclass 236.4 of Class 360; Subclass 236.4 “is indented under **subclass 235.4**.” (Emphasis in original) Subclass 235.4 of Class 360 is defined as “Air bearing surface detail: ... [and] is indented under **subclass 234.3**” and its “subject matter including specifics of the configuration of a disk confronting slider that generates and air bearing” and is annotated with “(2) Note. Generation of the air bearing often utilizes protrusions from the body of the slider termed *rails*.”

Additionally, Subclass 235.6 of Class 360, “Leading end detail ... is indented under **subclass 235.5**. Subject matter including specifics of the slider leading end.” Subclass 235.5 of Class 360, “Negative pressure type: ... is indented under **subclass 235.4**. Subject matter wherein the slider in part uses subambient pressure.”

Based upon these class definitions, the slider includes its *rails* and those *rails* include their “*leading end detail*.” The rationale given in Paper No. 20080624 however, critically depends upon an obliteration of that “*leading end detail*.” In essence, that rationale seeks to rewrite these class definitions to exclude that “*leading end detail*.” Not only is this an unconventional garbling of the class definitions, it is a modification of Chhabra ‘791 that deprives Chhabra ‘791 of its facilitation of lift provided by its “leading edge tapers 226, 227.” In short, the Examiner’s rationale requires an alteration of Chhabra ‘791 that is not taught within the four corners of Chhabra ‘791. Moreover, this alteration impermissibly prevents Chhabra ‘791 from being deployed and operated in its intended mode of operation. Accordingly, this rejection is thus untenable, and may not be maintained. Its withdrawal is respectfully urged.

**B. The Examiner’s interpretation of Chhabra U.S. 791 contradicts the explicit teaching of Chhabra ‘791.**

The rationale given by Paper No. 20080624 for the Examiner’s conclusion that claims

---

<sup>2</sup> Crane *et al.*, ‘650, col. 7, lines 58-60.

21, 31, 42, 52 and 55 are unpatentable under 35 U.S.C. §102(e) because the Examiner has concluded that claims 21, 31, 42, 52 and 55 are anticipated by both Chhabra '791 and by Crane '650, is premised upon the Examiner's conclusions that,

“Chhabra (US 5,831,791) discloses a U-shaped air bearing platform ... . That is, the U-shaped air bearing platform is formed by the *flat facing, non-tapered portion of rails 204 205*, including the non-tapered portions 204, 205, which collectively form the U-shaped air bearing platform.” (Emphasis in original)

and that Crane '650 discloses,

“ a plurality of arcuately shaped arms (82, 84) - note that the arms do not include the lapped leading edge taper (102) as seen in FIG. 3a and 10A of Crane et al. (US 5,721,650).”

These excerpts from the Examiner's rationale endeavors to ignore the explicit teaching of Chhabra '791 that in the construction of “NPAB 190”, “first and second raised side rails 204, 205 have leading edge tapers 226, 227 for facilitating lift”<sup>3</sup> by making an artificial segregation of “leading edge tapers 226, 227” from “first and second raised side rails 204, 205.” Applicant submits that this is a modification of Chhabra '791 that deprives Chhabra '791 of its facilitation of lift provided by its “leading edge tapers 226, 227;” and by Crane *et al* '650 that “side rails 82 and 84 *each* include a *leading portion* 256 ... .” In short, the Examiner's rationale requires an alteration of Chhabra '791 and of Crane *et al* '650 that is not taught within the four corners of either Chhabra '791 or Crane *et al* '650. Moreover, this alteration impermissibly prevents Chhabra '791 and Crane *et al* '650 from being deployed and operated in their respective intended modes of operation. Crane *et al* '650 for example, extensively documents in Figure

---

<sup>3</sup> Chhabra '791 , column 5, lines 49 and 50.

4, and in column 6, lines 8 through 41, the improvements to performance contributed by “the leading taper” of its “slider 70.” In both references, the Examiner, unsupported by any evidence of fact present in the administrative record of this prosecution history, summarily truncates the tapered leading edges of both Chhabra ‘791 and Crane *et al* ‘650, despite the express requirements of these references for the “leading edge details” of Chhabra ‘791 and Crane *et al* ‘650. Accordingly, this rejection is thus untenable, and may not be maintained. Its withdrawal is respectfully urged.

Under 35 U.S.C. §102(e), such an artificial butchering of the “first and second raised side rails 204, 205” Chhabra ‘791 is fails to make a *prima facie* demonstration of obviousness because “[a] combination, as a whole, possesses attributes distinct from those of its constituent elements and of their co-operative law. It represents an independent and original ideal of means. Its force is a resultant from the union of the individual forces of its elements. Its object is the material on which its functions are performed. Its mode of application is the method in which the co-operating actions of its elements directs its force upon their common object. The *inventive act* by which its is created may manifest itself in the production of a new force by the union of the old, as in a chemical combination; or in the subjection of a new object to the co-operative forces of its elements, as in some special arts; or in the contrivance of a new method for applying these united forces to their object, as in many forms of manufacturers and machines.”<sup>4</sup> The Examiner’s rationale “the U-shaped air bearing platform (flat facing,

---

<sup>4</sup> *The Law Of Patents For Useful Inventions*, by Wm. C. Robinson, Little, Brown 1890, §281.

non-tapered portion of rails 204 205, including the non-tapered portions 204,205, which collectively form the U-shaped air bearing platform)” of Chhabra ‘791 contradicts the explicit teaching of Chhabra ‘791 that the “leading edge tapers 226, 227” of Chhabra “791 are critical “for facilitating lift.”<sup>5</sup> It is essential therefore, that “first and second raised side rails 204, 205” be view as they are taught by Chhabra ‘791, that is, as “first and second raised side rails 204, 205” that “have leading edge tapers 226, 227 for facilitating lift.”<sup>6</sup> Not only do “first and second raised side rails 204, 205” when viewed in their entirety including their “leading edge tapers 226, 227 for facilitating lift” define an alphabetic character other than Applicant’s “U-shape”, but fail to anticipate Applicant’s “U-shaped air bearing platform spaced-apart from said front edge.”

No claim is anticipated under 35 U.S.C. §102(e) unless all of the elements are found in exactly the same situation and united in the same way in a single prior art reference. As mentioned in the **MPEP §2131**,

“a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Every element must be literally present, arranged as in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (CAFC 1989). The identical invention must be shown in as complete detail as is contained in the patent claim. *Id.*, All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 165 USPQ 494, 496 (CCPA 1970), and MPEP 2143.03.”

---

<sup>5</sup> Chhabra ‘791 , column 5, lines 49 and 50.

<sup>6</sup> Chhabra ‘791 , column 5, lines 49 and 50.



Paper No. 20080624 brazenly departs from the Office's accepted interpretation of 35 U.S.C.

§102(e) when it argues that:

“the Examiner has not considered the leading edge tapers of the slider rails as being a part of the U-shaped platform since: (1) they are not flat; (2) they are not in the same plane as the flat portion of the U-shaped air bearing platform, and (3) since the non-tapered flat rail portions (U-shaped air bearing platform) used in primary floating the slider over a spinning recording medium.”

Neither Chhabra '791's Figure 13b nor Crane '650's Figure 10A, nor the accompanying text of the specifications of Chhabra '791 nor Crane '650 either teach or suggest that their respective leading edges are not integral portions of their respective air bearing surfaces. Moreover, both Chhabra '791 and Crane '650 explicitly teach that, in contravention of the Examiner's argument set forth in Paper No. 20080624, specific operational requirements are imposed upon their respective leading edges; suggests that their leading edges are neither critical nor essential to the performance of their sliders.

Here, Chhabra '791 lacks both claim 21's "U-shaped air bearing platform" and Applicant's "U-shaped air bearing platform spaced-apart from said front edge, said U-shaped air bearing platform circumscribing a majority of said principal surface while defining a negative pressure cavity on said principal surface, said U-shaped air bearing platform comprising not more than two separate air bearing platforms." Consequently, there is no *prima facie* demonstration of anticipation within the four corners of Chhabra '791. Withdrawal of this rejection is earnestly requested.

- C. This rejection is impermissibly premised upon the administrative finding by the Examining staff that there are no structural difference between any two shapes, regardless of what dissimilarities those shapes have.**

The departure in Paper No. 200800624 from accepted practice in mechanical engineering of referring to particular shaped by the corresponding Roman or other alphabetic symbol, is a cause of grave concern. It suffices to observe that when asserting that Chhabra '791 anticipates Applicant's claims 21 through 23, 25, 26, 30 through 34, 36, 37, 41 through 44, 46, 47, 51 through 52, 54, 55, 57, 58 and 60 are rejected under 35 U.S. C. §102(e), even after admitting that,

“the Examiner has not considered the leading edge tapers of the slider rails as being a part of the U-shaped platform since: (1) they are not flat; (2) they are not in the same plane as the flat portion of the U-shaped air bearing platform, and (3) since the non-tapered flat rail portions (U-shaped air bearing platform) of the slider are the air bearing surfaces used in primarily floating the slider.”

Applicant respectfully submits that the Examining staff is endeavoring to argue that Chhabra '791's "H" shaped air bearing surface simultaneously teaches a "U" shaped air bearing surface.

The error in this assertion by the Examining staff is easily demonstrated by observing that with a highly selective picking-and-choosing among the structural features of Chhabra '791's Figures 13a and 13b, there is no doubt that Chhabra '791 could also be found to teach many other "shapes." The Examining staff has stooped to arguing that there is no difference between these distinct shapes taught by Chhabra '791 and the various features of Applicant's rejected claims such as, by way of example, Applicant's:

“U-shaped air bearing platform”; or

“U-shaped air bearing platform spaced-apart from said front edge.”

Undoubtedly, the Examining staff is prepared to also assert that Chhabra '791's Figures 13a and 13b teach an "A" shape, a tilted "C" shape, a titled "D" shape, a "H" shape, a "M" shape, a "N" shape, a "V" shape, and a "Y" shape. Given the breath of this interpretation of the single shape taught by Chhabra '791, the Examining staff has, in point-of-fact, based its conclusion of

anticipation upon its administrative finding that there are no structural differences between any two shape, regardless of what dissimilarities those shapes have. This administrative finding is owever, unsupported by the evidence of record in the prosecution history of this application. Moreover, this administrative finding is unsupported by either administrative, judicial or statutory authority.

In endeavoring to ignore the portion of the air bearing surface adjoining the leading edge of Chhabra '791's slider, perhaps Paper No. 20080624 is asserting that Chhabra '791 discloses two "U-shaped" air bearing surfaces *joined together* in a side-by-side fashion, when the Examiner writes,

"(e.g., each flat, non-tapered portion of rail, 204 and 205, is considered a separate air bearing platform) each extending rearwardly toward said rear portion (RP) of said principal surface (PS)."

Linguistically under current English language convention however, such a geometric construct is not known as two separate "U-shaped air bearing surfaces in the singular number, but as a "***double*** U-shaped air bearing surface", or even more conventionally, as a "***W***-shaped air bearing surface" in the singular number.

Alternatively, when Chhabra '791 discloses two "U-shaped" air bearing surfaces *joined together* in an end-to-end fashion, as opposed to a side-to-side fashion, that geometric construct is not known as two separate "U-shaped air bearing surfaces in the singular number, but as a "***H***-shaped air bearing surface" in the singular number. In short, the structure taught by Chhabra '791's Figure 13b kindly annotated by the Examiner is conventionally referred to as a "***H***-shaped air bearing surface" in the singular number, in the same manner that a steel structural member constructed with two generally parallel flanges, is conventionally referred to as a "***H***-shape" in the singular number, and not as two distinct "***U***-shapes", and not as two distinct "***C***-shapes."

In summary, the fact that neither Chhabra '791<sup>7</sup> nor Crane '650<sup>8</sup> refer to their respective sliders as defining "*U*-shapes", but instead use other, non-alphabetic terms, is indicative of the speciousness of the analysis of Chhabra '791 nor Crane '650 given by Paper No. 20080624, graphically demonstrates that Applicant's concern about the Examiner's departure from both the conventions of naming shapes customarily following in mechanical engineering practice and in the Glossaries of the Class Definitions, is extreme and unjustified by current U.S. claim drafting or by the explicit teachings either Chhabra '791 or Crane '650. In short, the administrative record of this compacted reissue proceeding is devoid of evidence of record that supports the Examiner's argument that Chhabra '791 and Crane '650 teach a "*U*-shaped" air bearing surface. Withdrawal of these rejection of claims 21 through 23, 25, 26, 30 through 34, 36, 37, 41 through 44, 46, 47, 51, 52, 54, 55, 57, 58, 60 as anticipated by Chhabra '791 under 35 U.S.C. 102(e), and the rejection of claims 52 through 60 under 35 U.S.C. §102(e) as anticipated by Crane *et al.*, U.S. Patent No. 5,721,650, is therefore respectively urged.

**II. Rejection of Claims 52-60 under 35 U.S.C. §102(e) are being anticipated by Crane *et al.*, U.S. Patent No. 5,721,650**

Claims 52 through 60 are rejected under 35 U.S.C. §102(e) as anticipated by Crane *et al.*, U.S. Patent No. 5,721,650.

Paper No. 20080624 states that:

"At the outset, the Examiner directs the attention of the reader of this Office action to see Examiner's marked-up copy of FIG. 10A of Crane *et al.* (US 5,721,650) previously enclosed at the end of the Office action mailed on February 14, 2008.

As per claim 52, Crane *et al.* (US 5,721,650) discloses a negative pressure air bearing slider (FIG. 10A; see also appended Examiner's marked-up copy of FIG. 10A of Crane *et al.* (US

---

<sup>7</sup> Chhabra '791 refers to Figure 13b as showing "a trirail NPAB slider."

<sup>8</sup> Crane '650 refers to Figure 10A as showing simply "slider 70."

5,721,650) at the end of this Office action)) having a negative pressure cavity (100), comprising: a body with a principal surface disposed to confront a recording surface of a recording medium, said principal surface (PS) having a lead portion (LP) separated from a rear portion (RP) by a central portion (CP), said lead portion (LP) and said central portion (CP) being spaced upstream from said rear portion (RP) relative to a rotational direction of any recording medium confronted by said slider (70), said lead portion (LP) having a front edge (FE), said rear portion (RP) having a rear edge (RE), said front edge (FE) and said rear edge (RE) connected together by longitudinal sides (sides of slider (70)) of said principal surface in a longitudinal direction (LD) of said slider body (70); and a plurality of arcuately shaped arms (82, 84) - note that the arms do not include the lapped leading edge taper (102) as seen in FIG. 3a and 10A of Crane et al. (US 5,721,650) - the arms (82, 84) each having distal ends extending from opposite ones of said longitudinal sides curving inwardly across said central portion (CP) of said principal surface (PS) with spaced-apart proximal facing ends (at 280 on each side - see FIG. 10A) of said arms (82, 84) together forming a U-shaped air bearing platform (82, 84) located between said longitudinal sides to separate a negative pressure cavity (at 100) defined by said arms (82, 84) on said principal surface (PS) from said longitudinal sides, at least one of said arms (82, 84) extending from an edge of one of said longitudinal sides; at least one of said arms (82, 84) having a proximal end spaced-apart from said front edge by at least the leading edge taper (102); a distal end of at least one of said arms (82, 84) forming a terminal end (TE) wholly within said central portion (CP) and spaced-apart from said rear portion (RP).

This conclusion is premised upon the Examiner's argument that "at least one of said arms (82, 84) having a proximal end spaced-apart from said front edge by at least the leading edge taper (102)." A similar conclusion is set forth in Paper No. 20080624 about Chhabra '791 about each of independent claims 31, 42, 52 and 55, each of which define, in various terms, and using alternative comparable language, that at least one of Applicant's "air bearing platforms" is "spaced-apart from said front edge." In both instances however, the Examiner's conclusion is unsupported by evidence in the administrative record of this prosecution history, because both Chhabra '791 and Crane '650 require what the Class Definitions of U.S. Class 360 defines as

the "leading edge details" to contribute to the desired perform of their respective sliders.


This impermissible prevents these two references from being used in their respective modes of operation. Consequently, the rejection is not sustainable on the administrative record before the Office. Its withdrawal is respectfully urged.

**Allowable Subject Matter**

The Examiner's indication of the allowable of pending dependent claims 24, 27 through 29, 35, 38 through 40, 45, and 48 through 50, is noted with appreciation.

No fee is incurred by this paper.

Respectfully submitted,



Robert E. Bushnell,  
Attorney for the Applicants  
Registration No.: 27,774

1522 "K" Street N.W., Suite 300  
Washington, D.C. 20005  
(202) 408-9040

Folio: P56525RE  
Date: 7/26/2008  
I.D.: REB/kf